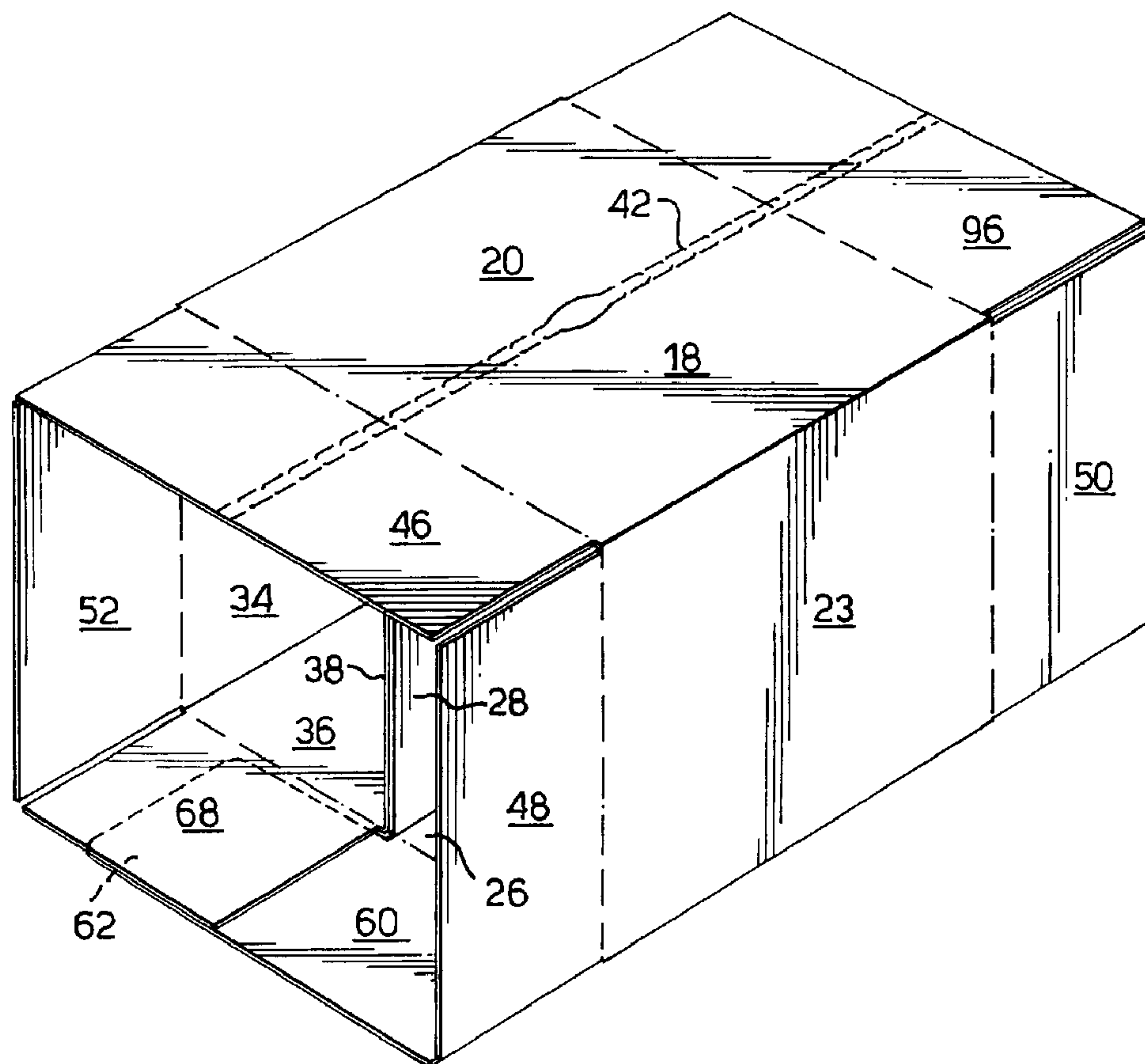




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 (54) Title: DIVISIBLE MULTI-CARTON PACKAGE



(57) Abrégé/Abstract:

A multi-carton package (10) especially useful for shipping bottles. The package may be readily divided into separate packs or cartons (12, 14). The packs include easy opening tabs. A blank for a package and a method of folding the blank is also disclosed.

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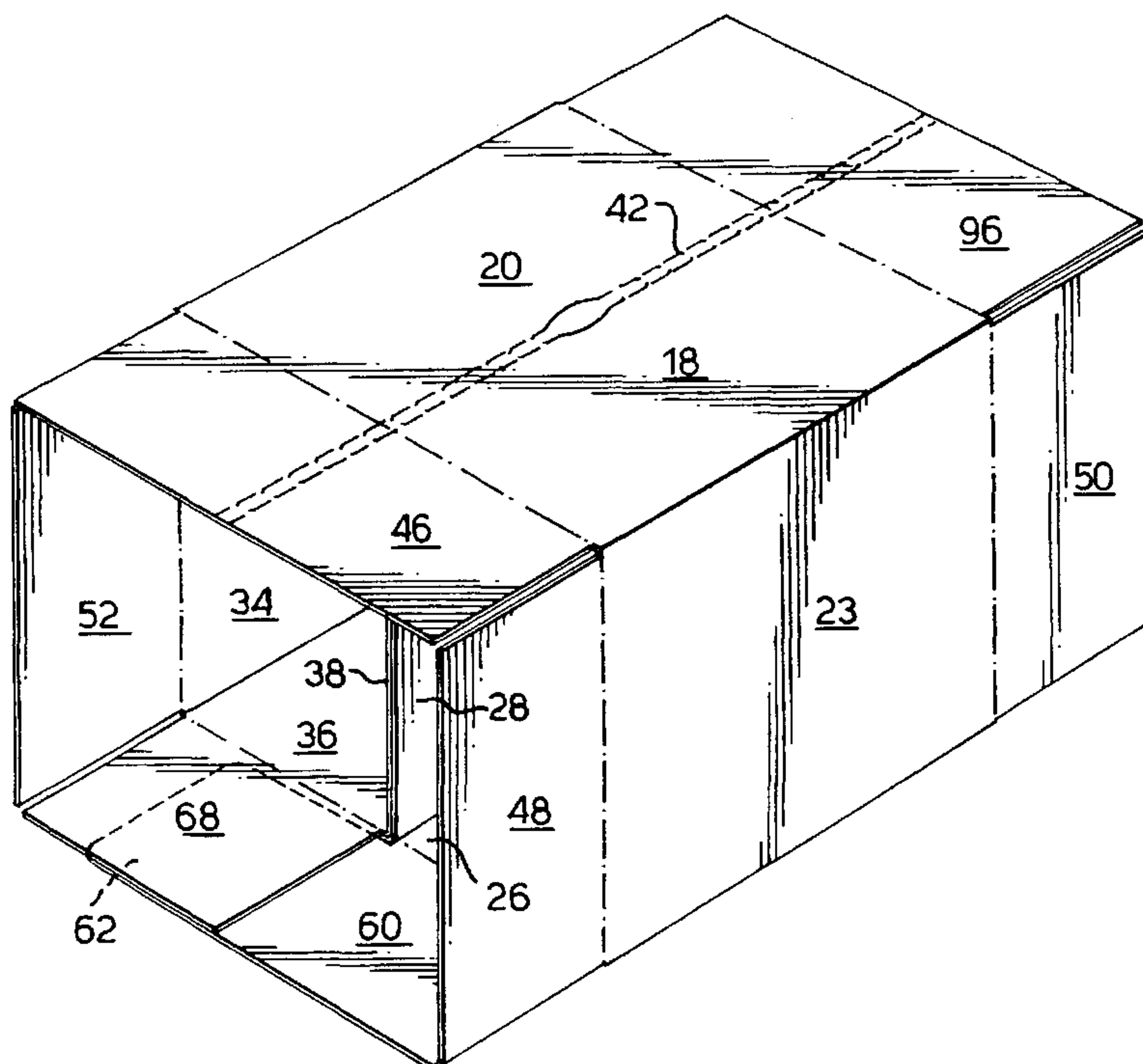
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(54) Title: DIVISIBLE MULTI-CARTON PACKAGE



(57) Abstract: A multi-carton package (10) especially useful for shipping bottles. The package may be readily divided into separate packs or cartons (12, 14). The packs include easy opening tabs. A blank for a package and a method of folding the blank is also disclosed.

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DIVISIBLE MULTI-CARTON PACKAGE

The present invention relates to a multi-carton package especially useful for shipping bottles. The package may be readily divided into separate packs or cartons. The packs include easy opening tabs. A blank for the package and a method of folding the blank into a package is also provided.

In most of the packages used in the shipping industry today, six bottles are packed into a paperboard wrap or a carton. Two such cartons are put into each shipping package. The use of so many packages and cartons increases shipping costs. Thus, it would be desirable to use a single shipping package which holds twelve bottles and which splits easily to form two six-pack cartons.

Accordingly, it is an object of the present invention to provide multi-carton packages wherein each carton may be varied in size. For example, the size of the carton may be varied, so that more or less than six bottles, or other containers can be included in each carton. In addition the package may be made so that it can be split into more than two cartons.

Numerous types of multi-carton packages are known in the prior art.

U.S. Patent No. 3,135,457 (Risucci) describes a carton having multiple compartments which are made from separable units.

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U.S. Patent No. 2,998,179 (Zilles) describes a multi-compartment carton having a rib separating the compartments. A flange extends from the rib and is adhered to one inside panel of the carton. An end of a second panel is adhered to
5 the outside of a third panel.

U.S. Patent No. 1,898,231 (Weiss) illustrates a multi-compartment carton having a partition with an attaching flap and attaching wall which is continuous with a side wall of
10 the carton.

U.S. Patent No. 2,697,544 (Morand) discloses a plural compartment box formed from a single blank of sheet material.
15

Patents disclosing weakened portions defined by scores or cuts include U.S. Patent No. 2,828,060 (Brown), U.S. Patent No. 3,015,432 (Tyrseck); U.S. Patent Nos. 3,491,937 and 3,719,317 (Brastad) and U.S. Patent No. 2,259,822
20 (Kienlen). Other cartons are disclosed in U.S. Patent Nos. 2,852,180; 2,881,968; 2,884,180; 2,936,104; and 2,992,767. GB 2,322,349 and EP 860,371.

U.S. Patent No. 3,261,536 (Bixler) discloses a carton having
25 a delamination portion on a flap. U.S. Patent No. 2,936,104 (De Blaere) discloses a slit which extends only partially through the carton structure forming the front wall and provides a weakened outer surface area to aid opening of the carton and to prevent peeling of the front wall when the
30 carton is opened.

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U.S. Patent No. 3,182,887 (Larson) discloses a carton having a delaminating portion.

U.S. Patent No. 3,113,713 (Green) discloses a carton having
5 unprinted triangular areas.

U.S. Patent No. 5,505,370 (Brown et al) discloses a multi-carton package which may be readily divided into separate cartons by the consumer.

10

The present invention relates to a package comprising at least two detachable cartons. The package of the invention is preferably formed from a single integral blank and the two detachable cartons share a top panel having a line of
15 weakness through which the cartons may be separated. Each of the two cartons includes a lateral side panel, a bottom panel, a medial side panel and a glue flap extending from the medial side panel. Each of the glue flaps is adhered to a respective portion of the top panel. The cartons include
20 front and rear opening flaps. Preferably the front opening flaps include lift tabs.

By providing a package which splits into two cartons, less tape is used than when individual cartons are placed in a
25 larger shipping package as described above, thereby conserving tape and improving the printing of graphics on the package. The package of the invention utilises the materials of the blank very efficiently. The package also allows ready separation of the cartons and facile opening of
30 the carton flaps for access to product.

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For a more complete understanding of the above and other features and advantages of the invention, reference should be made to the following detailed description of the preferred embodiments which is provided by way of example
5 only and with reference to the accompanying drawings, in which:

FIG. 1 is a top plan view of a blank used to construct the package of the invention;

10

FIG. 2 is a top perspective view of an erected package of the invention wherein the front and lateral closing flaps are partially opened;

15 FIG. 3 is a bottom perspective view of an erected package of the invention wherein the bottom and lateral closing flaps are partially opened;

FIG. 4 is a side view of an erected package of the invention
20 wherein all the closing flaps are partially opened, and

FIG. 5 is a perspective view of a fully erected package of the invention which shows a lateral side panel, two bottom panels, and bottom and top closing flaps.

25

As used herein, "top" refers to the side of the package to which the first and second glue flap described below are adhered by glue. As used herein a glue flap refers to a glue flap as described below, which is adhered to another
30 surface of the package by glue or other adhesive.

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The package 10 (see Figs.2 and 3) comprises a first carton 12 and a second carton 14. A first carton 12 comprises top panel 16 (see Figure 1) which includes adjacent top sub-panels, 18 and 20, first proximal lateral side panel 23, first bottom panel 26, and first medial lateral side panel 28. First glue flap 30 extends from panel 28 and is adhered to the underside of the first top sub-panel 18.

A second carton 14 comprises a second top sub-panel 20, a second proximal lateral side panel 34, a second bottom panel 36, and second medial lateral side panel 38. A Second glue flap 40 extends from the second medial lateral side panel 38 and is adhered to the bottom of second top sub-panel 20. A perforated cut line 42 separates the first top sub-panel 18 from the second top sub-panel 20.

A first front closing flap 46 is connected by a folding line to top sub-panels 18 and 20 and said first front closing flap is divided by a line of weakness 42 which is continuous with the line of weakness 42 dividing top sub-panels 18 and 20.

A second front closing flap 96 is connected by a folding line to the opposite end of top sub-panels 18 and 20 and said second front closing flap 96 is divided by a line of weakness 42 which is continuous with the line of weakness 42 dividing top sub-panels 18 and 20.

Side lateral closing flaps 48 and 50 are attached by folding lines to opposite ends of first proximal lateral side panel 23.

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Side lateral closing flaps 52 and 54 are attached by folding lines to opposite ends of second proximal lateral side panel 34.

5

Side lateral closing flaps 60 and 64 are attached via folding lines to opposite ends of bottom panel 26. Side lateral closing sub-flaps 62 and 66 are attached via lines of weakness 80 to side lateral closing flaps 60 and 64 respectively.

10

Side lateral closing flaps 68 and 70 are attached via folding lines to opposite ends of bottom panel 36.

15

The package is assembled by folding the blank as shown in figure 1 and as described below. The package is assembled by folding bottom panels 26 and 36 so that they are facing and parallel to top sub-panels 18 and 20, folding distal side flap 28 and distal side flap 38 perpendicular to bottom panels 26 and 36 and top sub-panels 18 and 20. Glue flaps 30 and 40 are adhered to top sub-panels 18 and 20, respectively. Bottom sub-flap 62 overlaps and adheres to bottom closing flap 68 and bottom sub-flap 66 overlaps and adheres to bottom closing flap 70.

20

25

The closing flaps 60, 48, 46, 52, 68, 70, 54, 96, 50, 64 and 30 are then closed. Preferably the bottom closing flaps 96 and 46 are closed after side lateral closing flaps 48, 50, 52, and 54 are closed.

30

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Two cartons can be broken out from the thus formed package by breaking the lines of weakness 42 and 80. Since the lines of weakness 42 runs parallel with the line where medial side panels 28 and 38 contact top sub-panels 18 and 20 respectively, breaking this line of weakness reveals the top ends of the two contained cartons. Since the lines of weakness 80 run parallel to the line where the two medial side panels rest against each other, or come close to each other, breaking this line of weakness exposes the back ends of the two contained cartons.

Lines of weakness 90 and 100 are for opening each carton after it has been detached from the original package.

In a blank according to the present invention, each fold line between said glue flap and each medial lateral side panel may contain a large perforation such that when the package is assembled a portion of said respective large perforations overlap. The resulting opening can be used to carry the package when just that portion of the line of weakness over it and between the two top sub-panels has been opened.

If desired, the major and/or minor flaps may be shielded. That is, their length in the direction facing the opposing flap is shortened to conserve paperboard.

The carton may be made of paperboard, coated paperboard, or any other appropriate material. Hot melt or chemical adhesive such as glue may be used to adhere portions of the

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carton together. An appropriate coating would be a low density polyethylene extrusion coating.

The blank may be made by methods known in the art, or by
5 methods analogous to those known in the art, out of materials that are known in the art or are analogous to those known in the art.

Certain changes may be made in the package of the invention
10 without departing from the clear teachings of the disclosure. For example, instead of having the lines of weakness dividing the top panel, the lines of weakness could divide both lateral side panels, running parallel to the folding lines attaching the lateral and top panel, and the
15 medial side panels could be rearranged so that the lines of weakness on each lateral side panel ran parallel to the line where the two medial side panels rested against each other or came close to each other. The medial side panels would be attached to each of the lateral side panels in this case.
20 In this case, of course, the carton would be broken in a different direction into two cartons.

It should be understood, of course, that the specific forms of the invention herein illustrated and described are
25 intended to be representative only, as certain changes may be made therein without departing from the clear teachings of the disclosure. Accordingly, reference should be made to the following appended claims in determining the full scope of the invention.

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CLAIMS

1. A package comprising at least two detachable cartons formed from an integral blank and separated by three lines of weakness, wherein the package includes a top panel divided by one of the lines of weakness into adjacent first and second top sub-panels, a first proximal lateral side panel, adjacent to and extending from said first top sub-panel, a first bottom panel adjacent to said first proximal lateral side panel and opposite said first top sub-panel and a first medial lateral side panel between said first top sub-panel and said first bottom panel and opposite said first lateral proximal side panel, a first glue flap extending from said first medial lateral side panel and adhered to said first top sub-panel, a second proximal lateral side panel, adjacent said second top sub-panel, a second bottom panel adjacent to said second proximal lateral side panel and opposite said second top sub-panel, and a second medial lateral side panel between said second top subpanel and said second bottom panel and opposite said second lateral side panel, and wherein said first and second lateral medial side panels are in contact or are in proximity with each other and overlap each other, a second glue flap extending from said second lateral medial side panel and adhered to said second top sub-panel, each of said cartons including lateral closing flaps comprising a lateral closing flap attached to each end of each lateral side panel by a fold line, and a front closing flap attached to each opposite end of the top panel, each front closing flap divided by a line of

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weakness which is continuous with the line of weakness between said two top sub-panels, and each of said cartons including bottom panel closing flaps comprising a separate bottom panel closing flap attached to each end of each bottom panel by a fold line, and wherein both bottom panel closing flaps on one carton, have a portion which extends over and adheres to the bottom panel closing flap on the adjacent bottom panel and has a line of weakness dividing one carton from the other carton, and wherein there is a line of weakness along the foldline between each bottom panel and its adjacent medial lateral side panel.

2. A package according to claim 1 wherein there is a line of weakness along the fold line between each bottom panel and its adjacent medial side panel.

3. A package according to Claim 1 or Claim 2 wherein the lines of weakness are perforated lines.

4. A package according to any one of Claims 1 to 3 wherein both bottom panel closing flaps on one carton, which extend over the bottom panel closing flaps on the adjacent bottom panels, are adhered to said bottom panel closing flaps on the adjacent bottom panels, so that both extending bottom panel closing flaps are outside of both said bottom panel closing flaps on the adjacent bottom panels.

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5. A package according to any one of claims 1 to 4,
wherein one bottom panel closing flap on one carton,
which extends over the bottom panel closing flap on the
adjacent bottom panel, is adhered to said bottom panel
closing flap, on the adjacent bottom panel so that it is
outside of said bottom panel closing flap on the
adjacent bottom panel.
6. A package according to any one of claims 1 to 5,
wherein both bottom panel closing flaps on one carton,
which extend over the bottom panel closing flaps on the
adjacent bottom panels, are adhered to said bottom panel
closing flaps so that both extending bottom panel
closing flaps are inside of both said bottom panel
closing flaps on the adjacent bottom panels.
7. A package according to any one of claims 1 to 6,
wherein said lines of weakness are two perforated lines
situated parallel to each other.
8. A blank for a package having at least two separable
cartons and having a longitudinal axis, wherein the
blank comprises a top panel divided by a line of
weakness extending transversely to the longitudinal axis
into adjacent first and second top sub-panels, a first
proximal lateral side panel adjacent the first top sub-
panel on a side opposite the second top sub-panel and
separated from said first top sub-panel by a first
proximal transverse scoreline, a first bottom panel
adjacent the first proximal lateral side panel on a side
opposite said first top sub-panel and separated from the

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first proximal lateral side panel by a first intermediate transverse scoreline, a first medial lateral side panel adjacent the first bottom panel on a side opposite the first proximal side panel and separated therefrom by a first distal transverse scoreline; a first glue flap extending from the first medial lateral side panel on a side opposite the first bottom panel and separated from the first distal lateral side panel by a first transverse glue flap scoreline; a second proximal lateral side panel adjacent to the second top sub-panel on a side opposite the first top sub-panel and separated therefrom by a second proximal transverse scoreline, a second bottom panel adjacent to the second proximal lateral side panel on a side opposite the second top panel and separated from the second proximal lateral panel by a second intermediate transverse scoreline, a second medial lateral side panel adjacent the second bottom panel on a side opposite the second proximal lateral panel and separated from the second bottom panel by a second distal transverse scoreline, a second glue flap extending from the second medial lateral side panel and separated therefrom by a second transverse glue flap scoreline; a front top major panel closure flap attached by a fold line, to both of said top panels, on each end of said top panels, and wherein each front top major panel closure flap has a line of weakness continuous with the line of weakness between the two top sub-panels, a bottom major panel closure flap attached to each end of each of the two said bottom panels by a fold line, and wherein both bottom major closure panels on one bottom panel have a

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portion which extends over the bottom major panel closure flap on said adjacent bottom panel, when the blank is assembled into a package having two cartons, and wherein said extending bottom major closure flaps, have a line of weakness situated between the two cartons when the blank is assembled, and wherein there is a line of weakness along the foldline between each bottom panel and its adjacent medial lateral side panel; and a lateral closure flap attached via a fold line to each end of the first and second medial lateral side panels.

9. A blank according to Claim 8 wherein the lines of weakness are perforated lines.
10. A blank according to Claim 8 or Claim 9 wherein the lines of weakness are two perforated lines situated parallel to each other.
11. A blank according to any of Claims 8 to 11 wherein each fold line between the glue flap and each medial lateral side panel has a large perforation such that when the package is assembled a portion of the respective large perforations overlap.

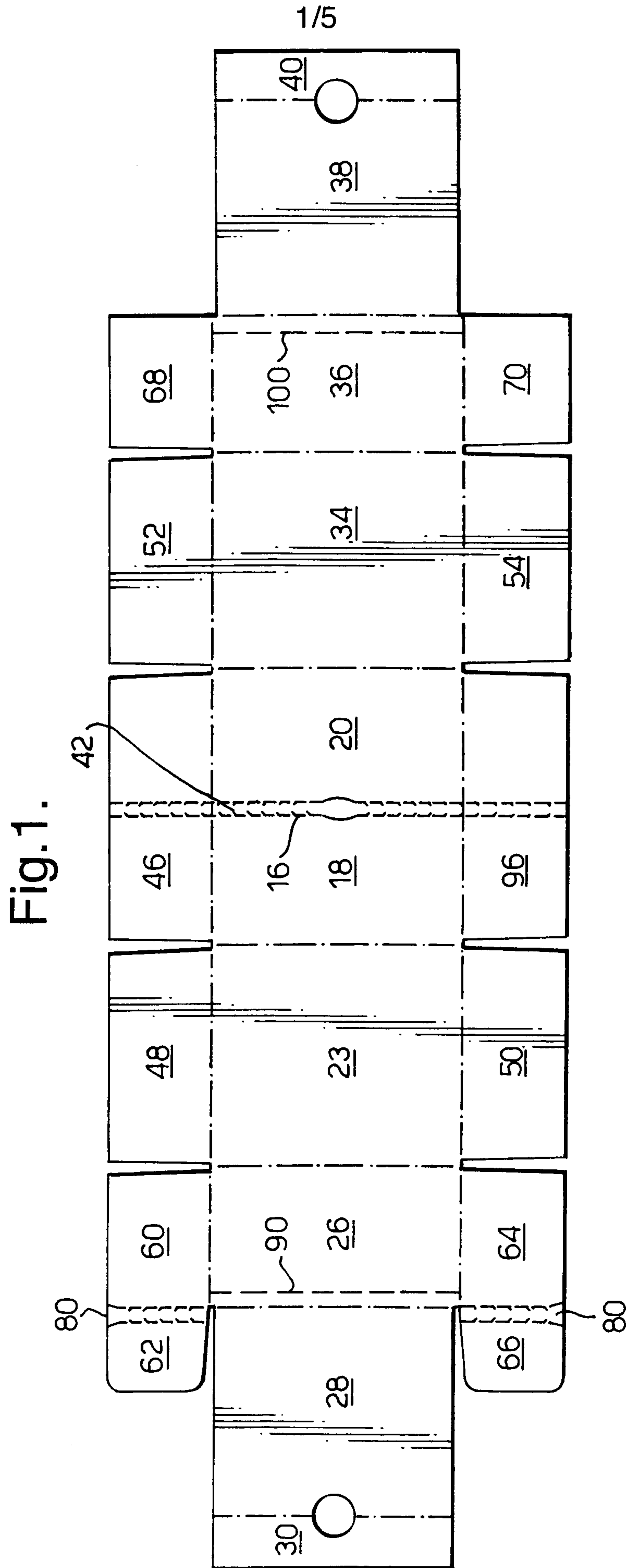


Fig.2.

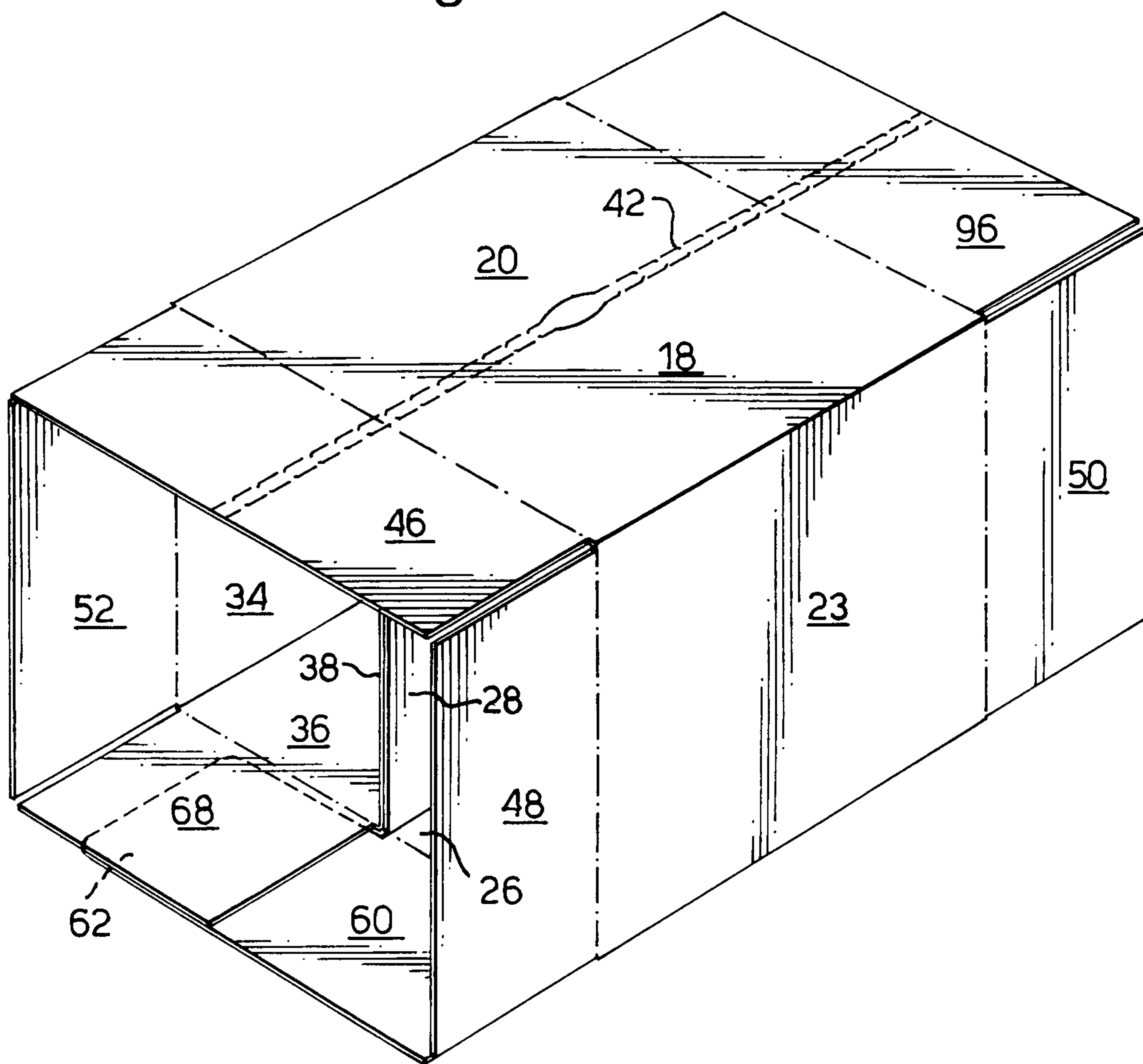


Fig.3.

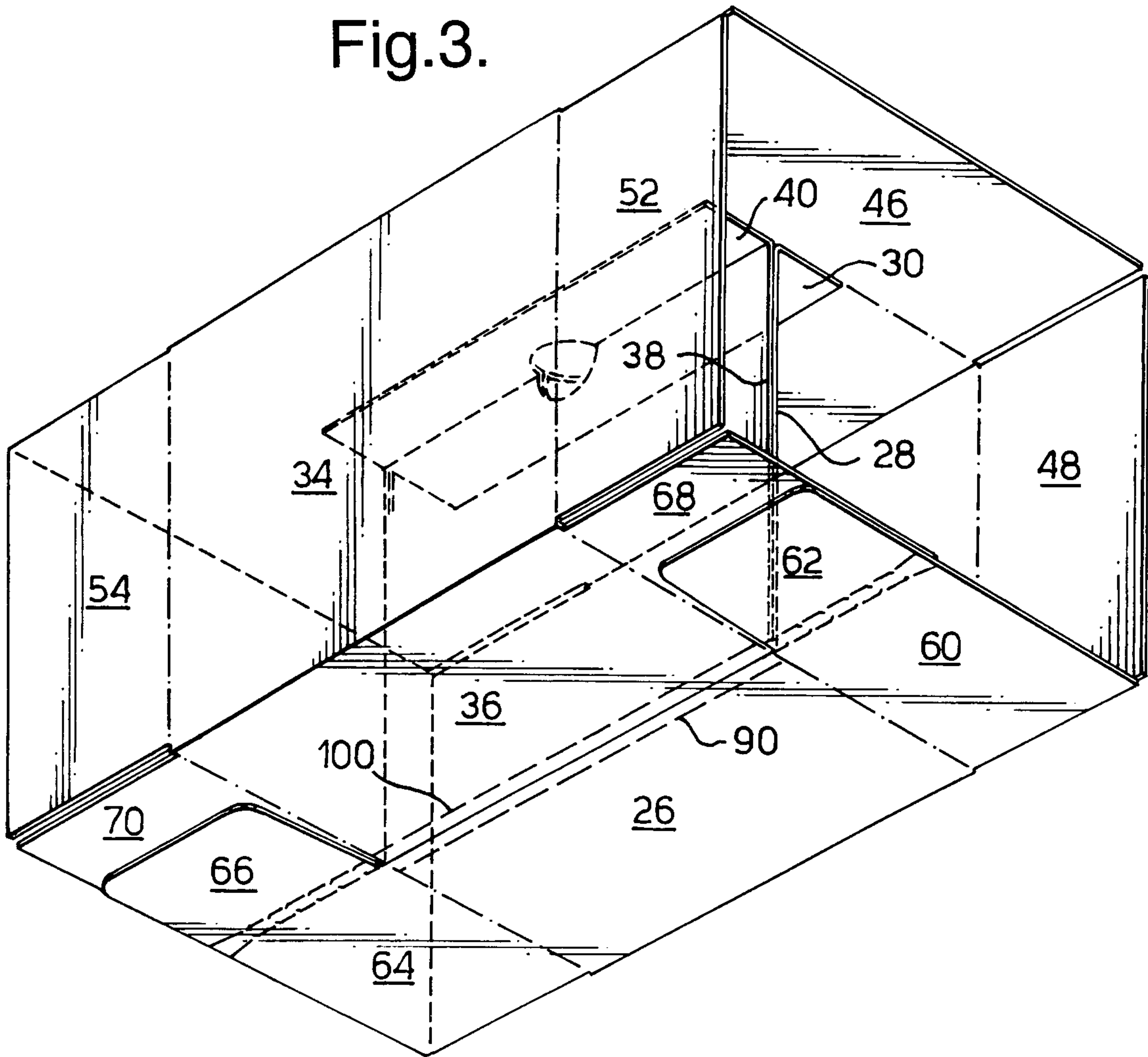


Fig.4.

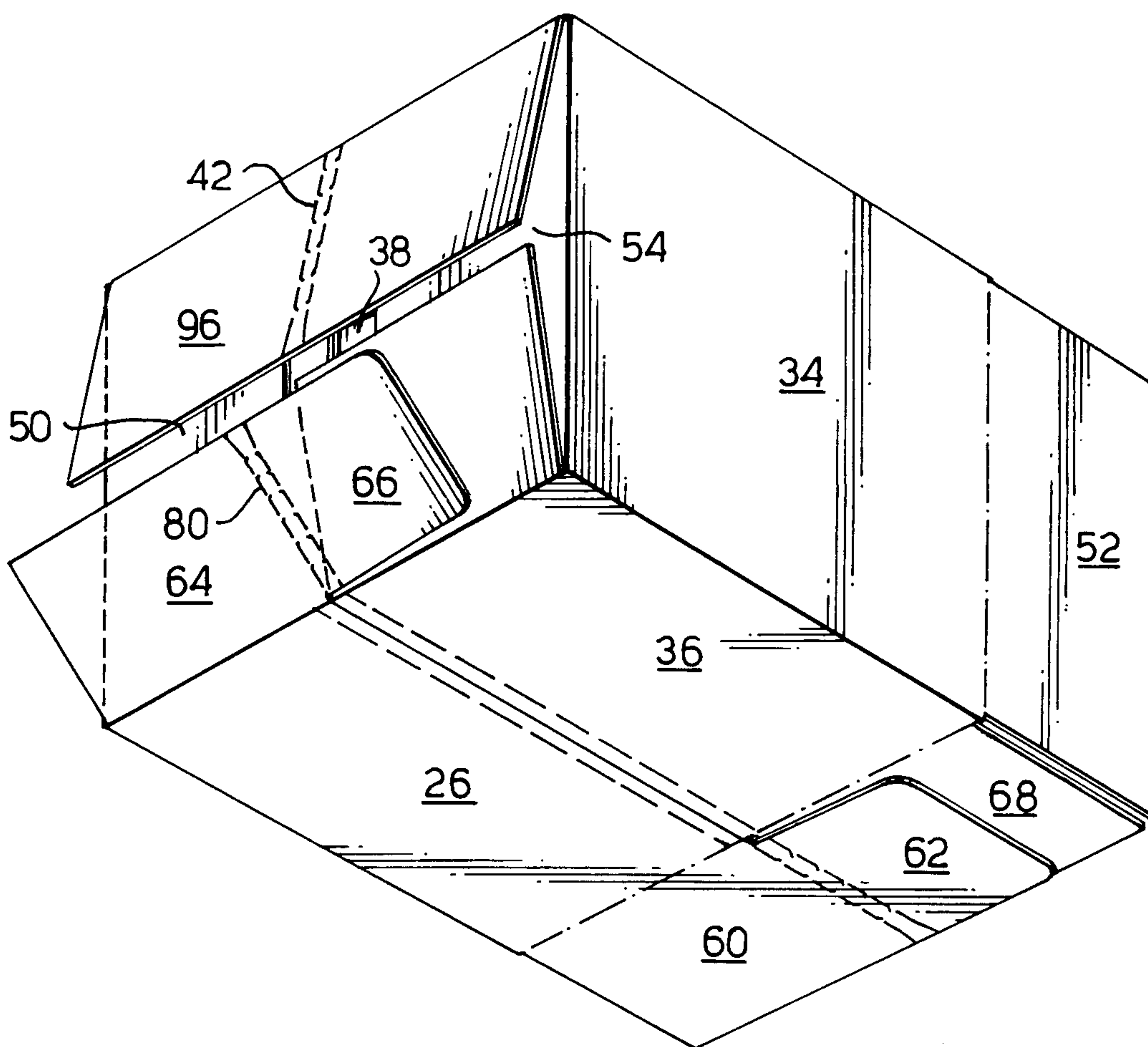


Fig.5.

